

EXAM TIPS

CHAPTER 1

INTRODUCTION

■ DEFINITION/ MEANING OF MICROECONOMICS

Microeconomics is the branch of economics, which deals with very small units of the economy. It studies behaviour of individual units of the economy rather than economy as a whole.

■ SCOPE OF MICROECONOMICS

1. Theory of demand
2. Theory of production and cost
3. Theory of product pricing
4. Theory of factor pricing
5. Theory of economic welfare

■ USES/ IMPORTANCE OF MICROECONOMICS

1. Helpful to understand working of the economy
2. Formulation of economic policy
3. Helpful in efficient allocation of resources
4. Helpful in the study of human behaviours
5. Solution of contemporary economic problems
6. Useful to understand international trade
7. Helpful in business decision making
 - i. Demand analysis and forecasting
 - ii. Cost analysis
 - iii. Price determination
 - iv. Optimal production decision
 - v. Optimal resources utilization

■ LIMITATIONS OF MICROECONOMICS

1. Static analysis
2. Assumptions
3. Wrong conclusion
4. Limited scope
5. Applicable only in free market economies

■ BUSINESS ECONOMICS: NATURE AND SCOPE

Business economics is the branch of economics which deals with the application of economic theories and methods for business and managerial decision making of a firm. It applies the economic theory and decision science tools to find optimum solution to managerial decision problems.

■ SCOPE OF BUSINESS ECONOMICS

1. Theory of demand
2. Theory of production and cost
3. Theory of product pricing
4. Theory of factor pricing
5. Theory of economics welfare

■ PRODUCTION POSSIBILITY CURVE (PPC)

Production possibility curve is defined as the locus of different combinations of any two goods that an economy can produce by the full utilization of its existing resources. In other words, production

possibility curve is the graphical explanation of scarcity, choice and opportunity cost.

■ CONCEPT OF MARGINAL ANALYSIS AND INCREMENTAL ANALYSIS

Marginal Analysis: Marginal analysis is the study of additional benefits of an activity compared to the additional cost incurred by the same activity. Marginal refers to the incremental or extra cost or extra benefit of the 'next' unit or individual.

Incremental Analysis: Incremental analysis is a broader concept than marginal analysis. It is economist's generalization of marginal concept. It involves alternative managerial decision or courses of action on revenues, costs, and profits. It focuses on the changes or difference between the available alternatives.

■ STATIC AND DYNAMIC EQUILIBRIUM ANALYSIS IN MICROECONOMICS

Equilibrium analysis in microeconomics is divided into following three types.

1. **Micro Static Analysis:** Micro static analysis is defined as the static relationship between microeconomic variables whose values relate to the same point of time or to the same period of time.
2. **Comparative Micro Static Analysis:** Comparative micro static analysis is defined as the comparative study between different equilibrium positions determined from the interaction between microeconomic variables at different points of time.
3. **Micro Dynamic Analysis:** Micro dynamic analysis is defined as the analysis of the process through which the system moves from one equilibrium to another. In other words, micro dynamic analysis explains the lagged relationship between the microeconomic variables.

■ TEN PRINCIPLES OF ECONOMICS

Ten Principles of Economics given by N.G. Mankiw consists of many central ideas of economics. The brief explanation of Ten Principles of Economics and its classification are given below:

How people make decisions

- Principle 1 : People Face Trade-offs
Principle 2 : The cost of something is what you give up to get it
Principle 3 : Rational people think at the margin
Principle 4 : People respond to incentives

How people interact

- Principle 5 : Trade can make everyone better off
Principle 6 : Markets are usually a good way to organize economic activity
Principle 7 : Governments can sometimes improve market outcomes

How economy as a whole works

Principles 8 : A country's standard of living depends on its ability to produce goods and services

Principle 9 : Prices rise when government prints too much money

Principle 10 : Society faces a short run trade-off between inflation and unemployment

CHAPTER 2

MARKET EQUILIBRIUM AND EFFICIENCY

■ DEMAND

Demand refers to the quantities of a commodity that the consumers are able and willing to buy, at each possible price during a given period of time, other things being equal.

■ KINDS OF DEMAND

1. Direct demand
 - a. Price demand
 - b. Income demand
 - c. Cross demand
 - i. Substitute goods
 - ii. Complementary goods
2. Indirect demand or derived demand
3. Joint demand
4. Composite demand
5. Competitive Demand

■ LAW OF DEMAND

Law of demand expresses the inverse relationship between the price of a commodity and its quantity demanded. It means that other things being equal, the demand for a commodity decreases with a rise in its price and increases with fall in its price. Geometrically, it is represented by a downward sloping demand curve.

■ DETERMINANTS OF DEMAND

1. Price of the commodity
2. Income of the consumer
3. Price of the related goods
 - i. Substitute goods
 - ii. Complementary goods
4. Tastes and preferences of the consumer
5. Advertisement
6. Size and composition of population
7. Consumer's expectation
8. Climate and weather

■ DEMAND FUNCTION

It expresses the functional relationship between demand for a commodity and its various determinants. It is expressed as under:

$$D_x = f(P_x, P_s, \dots, P_c, Y, T, E)$$

■ IMPORTANCE OR USE OF DEMAND ANALYSIS IN BUSINESS DECISION

1. Sales forecasting
2. Pricing decisions
3. Marketing decision
4. Production decision
5. Financial decision

■ LAW OF SUPPLY

The functional relationship between price and quantity supplied gives the law of supply. It states that there is positive relationship between price and quantity supplied.

■ DETERMINANTS OF SUPPLY

1. Price of the Commodity.
2. The Price of the Other Goods
3. The Price of the Factors of Production
4. Goal of the Firm
5. Improvement in Technology
6. Government Policy
7. Expected Future Price
8. Number of Firms
9. Development of Infrastructure
10. Natural Factors

■ SUPPLY FUNCTION

Supply function defined as the functional relationship between supply of a commodity and its various determinants. It is expressed as:

$$Q_x = f(P_x)$$

■ MOVEMENT ALONG THE SUPPLY CURVE

A movement along a supply curve is caused by the change in the price of the commodity, other things remaining the same. It is also called change in quantity supplied of the commodity. There may be two possibilities:

- a. Contraction in supply
- b. Extension in supply,

■ SHIFT IN SUPPLY CURVE (CHANGE IN SUPPLY)

A shift in supply curve is caused by the change in factors other than price of the commodity. Other factors includes, the price of the related goods, state of technology, goals of the firm, cost of production, government policy etc.

A change in any of these factors causes shift in supply curve. It is also known as change in supply. In a shift, a new supply curve is drawn. In a shift, there are two possibilities, rightward shift in supply curve and leftward shift in supply curve.

■ MARKET EQUILIBRIUM

In general sense, equilibrium means, balance in opposite forces. In the context of market analysis, equilibrium refers to a state of market in which quantity demanded for a commodity equals to the quantity supplied of the commodity. The equality of demand and supply gives an equilibrium price. That is, at equilibrium

price, demand and supply are in equilibrium. Market equilibrium changes when demand or supply or both change.

■ EFFECTS OF GOVERNMENT POLICY (TAX, SUBSIDY AND PRICE CONTROL) IN MARKET EQUILIBRIUM

The effect of government policies (tax, subsidy and price control) in the market equilibrium can be explained as follows:

1. **Effect of Tax Policy in Market Equilibrium:** The most important objective of taxation is to collect government revenue to meet its expenditure. Besides, taxes are regulation with the aim to influence the pattern of consumption, production and distribution. The taxes affect economy in various ways. The effects of taxes depend upon their structure, design and objectives.
2. **Effect of Subsidy Policy in Market Equilibrium:** Subsidies may be regarded as the negative taxes. Subsidies are provided by the government to the producers and consumers in order to encourage production and consumption of the goods and services which have positive externalities or which are under produced by the market.
3. **Effect of Price Control Policy in Market Equilibrium:** Price control policy is the government restriction on prices of goods and services in the market. The price control policies have adverse effects in the market.

■ CONCEPT OF MARKET EFFICIENCY

A market is efficient if the maximum amount of goods and services are being produced with a given level of resources and if no additional output is possible without increasing the amount of inputs. Efficient markets ensure optimal resources utilization by allowing for prices to motivate independent actors in the economy. The concept of economic efficiency includes the three main measures of efficiency, which are as follows:

1. Productive efficiency
2. X-efficiency
3. Allocative efficiency

■ MEASURING MARKET EFFICIENCY BY CONSUMER'S SURPLUS AND PRODUCER'S SURPLUS

Market efficiency is measured by the help of consumer's surplus and producer's surplus. The total sum of consumer's surplus and producer's surplus is total surplus. Consumer's surplus equals consumer's willingness to pay for a good minus the amount s/he actually pay.

Total Surplus = The amount the buyer is willing to pay - Cost to sellers

CHAPTER 3

ELASTICITY OF DEMAND AND SUPPLY

■ PRICE ELASTICITY OF DEMAND

Price elasticity of demand relates to the responsiveness of quantity demanded of a good to the change in its price. In other words, the price elasticity of demand is defined as "the proportionate change in quantity demanded in response to a small change in price, divided by the proportionate change in price".

$$E_P = -\frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

■ TYPES OF PRICE ELASTICITY OF DEMAND

1. Perfectly elastic demand
2. Perfectly inelastic demand
3. Unitary elastic demand
4. Relatively elastic demand
5. Relatively inelastic demand

■ INCOME ELASTICITY OF DEMAND

Income elasticity of demand shows the degree of responsiveness of quantity demanded for a good to the change in the income of the consumer. The income elasticity of demand is defined as the ratio of the proportionate change in demand for a commodity to the proportionate change in income.

$$E_Y = \frac{\Delta Q}{\Delta Y} \times \frac{Y}{Q}$$

■ TYPES OF INCOME ELASTICITY OF DEMAND

1. Positive income elasticity of demand ($E_Y > 0$)
 - i. Income elasticity greater than unity ($E_Y > 1$)
 - ii. Income elasticity less than unity ($E_Y < 1$)
 - iii. Income elasticity equal to unity ($E_Y = 1$)
2. Zero income elasticity ($E_Y = 0$)
3. Negative income elasticity ($E_Y < 0$)

■ CROSS ELASTICITY OF DEMAND

The cross elasticity of demand is defined as the percentage change in the quantity demanded of X resulting from a percentage change in the price of Y. In other words, the ratio of percentage change in the quantity demand of X to a given percentage changes in the price of Y. The cross elasticity of demand between good X and Y is given below:

$$E_{XY} = \frac{\Delta Q_X}{\Delta P_Y} \times \frac{P_Y}{Q_X}$$

■ METHOD OF MEASURING PRICE ELASTICITY OF DEMAND

1. Percentage method
2. Point method
3. Arc elasticity of demand
4. Total outlay method

■ DETERMINANTS OF ELASTICITY OF DEMAND

1. Nature of the commodity
2. Substitute
3. Goods having several use
4. Joint demand

5. Income of the consumer
6. Postpone of the consumption
7. Habits
8. Price level
9. Time factor

■ ADVERTISEMENT ELASTICITY OF DEMAND

The ratio of percentage change in quantity demanded and percentage change in advertisement expenditure is called advertising elasticity of demand. In other words, it is responsiveness of change in demand to the change in advertisement expenditure.

$$E_A = \frac{\Delta Q}{\Delta A} \times \frac{A}{Q}$$

■ USE OR IMPORTANCE OF PRICE ELASTICITY OF DEMAND

1. Monopoly price determination
2. Price determination under discriminating monopoly
3. Price determination of public utilities
4. Price determination of joint products
5. Wage determination
6. International trade
7. Importance to finance minister

■ USE OR IMPORTANCE OF INCOME ELASTICITY OF DEMAND

1. Useful to know about stage of trade cycle
2. Useful for forecasting demand
3. Useful for classification of normal and inferior goods
4. Useful for making marketing strategy

■ USE OR IMPORTANCE OF CROSS ELASTICITY OF DEMAND

1. Classification of goods
2. Classification of market
3. Pricing policy
4. Determination of boundaries between industries

■ ELASTICITY OF SUPPLY

The price elasticity of supply is defined as ratio between percentage change in quantity supply and percentage change in price of a commodity. It can be expressed as:

$$E_s = \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$$

■ TYPES OF ELASTICITY OF SUPPLY

1. Perfectly elastic supply
2. Perfectly inelastic supply
3. Unitary elastic supply
4. Relatively elastic supply
5. Relatively inelastic supply

■ FACTORS INFLUENCING ELASTICITY OF SUPPLY

1. Nature of the Commodity
2. Cost of Production
3. Time element
4. Producers expectation
5. Technical Condition of production

CHAPTER 4

ANALYSIS OF CONSUMER BEHAVIOUR

■ ORDINAL UTILITY

Ordinal utility only ranks the utility received from consuming various amount of a good or baskets of goods. Ordinal utility specifies that consuming two apples gives the individual more utility than when consuming one apple, but it does not specify exactly how much additional utility the second apple provides. Similarly, ordinal utility would say only that three apples give this individual more utility than two apples, but not how many more utils.

■ ASSUMPTIONS OF ORDINAL UTILITY ANALYSIS

1. Rationality
2. Ordinal utility
3. Diminishing marginal rate of substitution
4. Transitivity and consistency of choice
5. Non-satiety

■ INDIFFERENCE CURVE

An indifference curve shows the various combinations of two goods that give the consumer equal utility or satisfaction. A higher indifference curve refers to a higher level of satisfaction, and a lower indifference curve refers to less satisfaction. However, we have no indication as to how much additional satisfaction or utility a higher indifference curve indicates. That is, different indifference curves simply provide an ordering or ranking of the individual's preference.

■ INDIFFERENCE MAP

A set of indifference curve is called indifference map. An indifference map shows all the indifference curves which rank the preference of the consumer. Combinations of goods situated on an indifference curve give the same utility. Combination of goods situated on higher indifference curve gives higher level of satisfaction. Combinations of goods situated on lower indifference curve give lower level of satisfaction.

■ PROPERTIES OF INDIFFERENCE CURVE

1. Negative slope
2. Convex to the origin
3. Do not intersect each other
4. Higher the indifference curve, higher will be satisfaction

■ THE MARGINAL RATE OF SUBSTITUTION (MRS)

MRS refers to the amount of one good that an individual is willing to give up for an additional unit of another good without affecting level of satisfaction or

remaining on the same indifference curve. For example, the marginal rate of substitution of good X for good Y (MRS_{xy}) refers to the amount of Y that the individual is willing to exchange per unit of X and maintain the same level of satisfaction.

■ WHY DOES MRS DIMINISH?

1. The particular want is satiable:
2. Goods are not perfect substitute each other:
3. Increase in the quantity of one good does not increase the want satisfying of the other.

■ CONSUMER'S EQUILIBRIUM

A consumer will be in equilibrium or get maximum satisfaction where an indifference curve is tangent to the budget line so that the slope of the indifference curve (the MRS_{xy}) is equal to the slope of the budget line (P_x/P_y).

Price effect: Price effect depicts the effect of a change in the price of a commodity on its purchase keeping the prices of all other commodities, the consumer's income, and tastes and preferences constant.

The price-consumption curve for good X is the locus of (i.e., joins) consumer optimum points resulting when only the price of good X varies.

Income effect: Income effect shows the effect on consumer's equilibrium position of a change in income, prices remaining constant.

The income-consumption curve is the locus of (i.e., joins) consumer optimum points resulting when only the consumer's income varies.

Substitution effect: The substitution of one commodity by another commodity due to a change in relative prices in order to maintain the original standard of living is known as the substitution effect.

■ CRITICISM OF INDIFFERENCE CURVE

1. Two commodity model
2. Wrong assumptions
3. Tells nothing new
4. Can not explain about uncertainty
5. Income, preference and habit change

■ SUPERIORITY OF ORDINAL UTILITY (INDIFFERENCE CURVE APPROACH)

1. More realistic measurement of utility
2. No assumptions of consistency of marginal utility of money
3. Study of combination of two goods
4. Less Restrictive
5. More general theory of demand
6. Closer analysis of price effect

CHAPTER 5

THEORY OF PRODUCTION

■ CONCEPT OF TOTAL PRODUCT (TP), AVERAGE PRODUCT (AP), AND MARGINAL PRODUCT (MP)

Total Product (TP): Total product is defined as the total quantity of output produced by the producer employing all the available units of inputs in the given period of time.

Average Product (AP): Average product is defined as the total product divided by number of variable input or factor. In other words, it is the output per unit variable factor.

Marginal Product (MP): Marginal product is defined as the addition in total product as a result of one additional unit increase in labour or any variable input.

■ PRODUCTION FUNCTION

Production function is defined as functional relationship between physical inputs and physical output of a firm.

$$Q = f(L, K, O, T)$$

Types of Production Function

These two types of production function are explained as follows:

1. **Short-Run Production Function:** Short run is the time period in which a firm cannot change all of its inputs or factors.
2. **Long-Run Production Function:** Long run is the time period in which a firm can change all its factors of production or inputs.

■ COBB-DOUGLAS PRODUCTION FUNCTION

Cobb-Douglas production function is a specific production function which is most widely used in economic analysis. It is also most popular in applied research, because it is easiest to handle mathematically.

■ LAW OF VARIABLE PROPORTIONS

The law of variable proportions refers to the short run production function, which examines production with single variable factor keeping quantities of other factors constant. This law was propounded by the economists like Joan Robinson, Alfred Marshall, P.A. Samuelson, etc. This law is also known as the law of diminishing returns. This law is an important law of economics.

Stages of the Law

The law of variable proportions can be explained dividing it into following three stages:

1. **First Stage (Stage of Increasing Returns):** In this stage, total product increases at an increasing rate upto a certain point and then increases but at the decreasing rate.

Causes of Increasing Returns in the First Stage

- i. Increase in efficiency of fixed factor
- ii. Increase in the efficiency of variable factor

2. **Second Stage (Stage of Decreasing Returns):** This stage begins from the point B of TP. In this stage, total product continues to increase at the diminishing rate until it reaches at the point C.

Causes of Decreasing Returns in the Second Stage

- i. Scarcity of fixed factor
 - ii. Indivisibility of fixed factor
 - iii. Imperfect substitutability of the factor
3. **Third Stage (Stage of Negative Returns):** This stage begins from the point D. In this stage, TP is declining, AP is also declining and MP is negative or below X-axis. AP never becomes zero and negative. It is clear that when TP declines, MP becomes negative.

Causes of Negative Returns in the Third Stage

As the amount of the variable factor continuously increases to the constant quantity of the other, a stage is reached when the total product declines and the marginal product becomes negative.

■ ISOQUANT

Isoquant is defined the locus of different combinations of any two inputs (labour and capital) which yield same level of output.

Isoquant Map

The set of isoquants is called isoquant map. A higher isoquant represents higher level of output and lower isoquant represents a lower level of output.

Properties of Isoquant

The properties or features or characteristics of isoquant are as follows:

1. Slope of isoquant curve is negative
2. Isoquant curve is convex to the origin
3. Isoquant curve never intersect or tangent to each other
4. Higher isoquant represents higher level of output

Marginal Rate of Technical Substitution (MRTS)

The marginal rate of technical substitution is defined as the rate at which one input can be substituted for another output remaining constant.

■ ISOCOST LINE

Isocost line is defined as the locus of various combinations of any two inputs which the producer can get for a certain amount of money at a given prices of the factors of production or inputs.

Shift in Isocost Line

Isocost line shifts when there are changes in total outlay or price of factors of production. Such changes are explained separately below:

1. Effect of change in total outlay
2. Effect of change in price of factors of production or inputs

■ OPTIMUM EMPLOYMENT OF TWO INPUTS (LEAST COMBINATION OF TWO INPUTS)

Optimum employment of two inputs is also known as the least cost combination of two inputs or producer's equilibrium. It is assumed that a rational firm or producer always seeks to maximize profit.

■ LAWS OF RETURNS TO SCALE

Laws of returns to scale refers to long run input output relationship which explains how output changes when

all inputs are varied in the equal proportions. The laws returns scale is different from the law of variable proportions.

Increasing Returns to Scale

Increasing returns to scale refers to the increase in output at a greater proportion (percentage) than the proportionate or percentage increase in inputs. The main causes of increasing returns to scale are as follows:

1. Technical and managerial indivisibilities
2. Higher degree of specialization
3. Dimensional relations

Constant Returns to Scale

Constant returns to scale refers to the equal proportionate or percentage change in output and inputs. The main causes of constant returns to scale are as follows:

1. Limitations of economies of scale
2. Divisibility of inputs

Decreasing Returns to Scale

Decreasing returns to scale refers to increase in output at a smaller proportion or percentage than the proportionate or percentage increase in inputs. The main causes of decreasing returns to scale are as follows:

1. Managerial diseconomies
2. Limitedness or exhaustibility of the natural resources
3. Labour diseconomies

CHAPTER 6

COST AND REVENUE CURVES

■ COST

In order to produce goods and services a firm uses raw materials and factors of production called inputs. The expenditure incurred on these inputs is called cost. In other words, cost refers to all sorts of monetary expenditures incurred in the production of the commodity.

■ VARIOUS CONCEPT OF COST

1. Actual and opportunity cost
2. Implicit and explicit cost
3. Accounting and economic cost
4. Historical and replacement cost
5. Separable and common cost
6. Fixed cost and variable cost

Short-run cost: The short-run cost is the cost at which the firm operates in short-run.

Long-run cost: The long-run cost is the cost at which the firm operates in long-run.

Total cost: Total cost is the total expenses incurred by a firm in producing a given quantity. Short-run total cost is composed of two factors: $TC = TFC + TVC$.

Total fixed cost: Fixed cost refers to the expenditure incurred by the producer on the fixed

factors of production. In other words, total cost made on fixed factors of production is known as total fixed cost.

Total variable cost: Variable cost refers to the cost incurred on the variable factors of production. In other words, total cost made on variable factors of production is known as total variable cost.

Average fixed cost: The average fixed cost is obtained by dividing total fixed cost by the level of output.

$$AFC = \frac{TFC}{Q}$$

Average variable cost: Average variable cost is obtained by dividing total variable cost by the corresponding level of output.

Average cost: Average cost is obtained by dividing total cost by the corresponding level of output.

It can also be obtained by adding AFC and AVC.

$$\therefore AC = \frac{TC}{Q} = \frac{TFC + TVC}{Q} = \frac{TFC}{Q} + \frac{TVC}{Q} = AFC + AVC$$

■ WHY AC CURVE IS U-SHAPED?

In the short-run AC curve is 'U' shaped. It means that in the beginning, it falls and after reaching a minimum point it starts to rise upwards. It gets U shaped due to the following reasons.

1. Basis of AFC and AVC
2. Basis of the Law of Variable Proportions
3. Indivisibility of the Factors

Short-run Marginal Cost (MC): Marginal cost is defined as the change in total cost due to one unit change in output. Mathematically, marginal cost is the first derivative of total cost function.

$$MC_n = TC_n - TC_{n-1}$$

$$\text{or, } MC = \frac{\Delta TC}{\Delta Q}$$

The long-run costs are the costs incurred during a period which is sufficiently large to allow the variation in all factors of production including capital equipment, land and managerial staff to produce a level of output.

Long-run average cost is obtained by dividing the long-run cost by the level of output. A long-run cost curve depicts the functional relationship between output and the long-run cost of production. Long-run average cost curve is obtained from the short-run average cost curves.

■ WHY LAC IS 'U' SHAPED?

Mainly, the LAC curve is U shaped due to the operation of economies of scale and diseconomies of scale in production.

1. Economies of scale
 - i. Economies in production
 - ii. Technical economies
 - iii. Labor economies
 - iv. Marketing economies
 - v. Managerial economies
 - vi. Economies in transportation and storage

2. Diseconomies of scale
 - i. Managerial inefficiency
 - ii. Labor inefficiency

■ ECONOMIES OF SCOPE

Economies of scope are defined as the decrease in total cost of production due to increase in number of product by a firm. It occurs due to common use of resources and by products.

■ REVENUE

Money receipt by a firm from the sale of the product is called its revenue. In other words, the revenue of a firm is its sale receipts or money receipts from the sale of a product.

- i. **Total revenue:** Total revenue is the total amount of money received by the firm from the sales. In other words, total revenue is the sum of marginal revenue. Total revenue is the product of price and quantity sold. Thus, $TR = P \cdot Q$.

- ii. **Average revenue:** Average revenue is the price per unit. It is obtained by dividing total revenue by the number of units sold. Symbolically,

$$AR = \frac{TR}{Q} = \frac{P \cdot Q}{Q} = P$$

- iii. **Marginal revenue:** Marginal revenue is the addition to total revenue by the sales of an additional unit of the commodity. In other words, marginal revenue is obtained by dividing the change in total revenue by the change in quantity sold. $MR = \frac{\Delta TR}{\Delta Q}$

- iv. **Perfect competition:** Perfect competition is a market structure characterized by a complete absence of rivalry among the individual firms. Perfect competition is defined as a market structure in which there are large number of buyers and sellers of homogeneous product at uniform price.

- v. **Monopoly:** Monopoly is a market structure in which there is a single seller, there are no close substitutes for the commodity it produces and there are barriers to entry.

■ RELATIONSHIP BETWEEN PRICE ELASTICITY AND REVENUE

1. Price Elasticity of demand and marginal revenue.

$$MR = P \left(1 - \frac{1}{E_p} \right)$$

2. Relation between Price Elasticity of Demand and Average Revenue.

$$AR = MR \left(\frac{E_p}{E_p - 1} \right)$$

CHAPTER 7**PRODUCT PRICING THEORIES AND PRACTICES****■ MARKET STRUCTURE**

The market structure refers to the characteristics or structural variables of the market that affect managerial decisions. The characteristics or features market structure are as follow.

1. Number of firms in the industry
2. Size of the firm
3. Industry concentration
4. Technology used to produce goods and services
5. Demand and market conditions
6. Potential for entry

■ PERFECT COMPETITION

Perfect competition is the market structure which consists of large number firms (buyers and sellers) of homogenous products. The characteristics or features of perfect competition are as follow.

1. Large number of sellers and buyers
2. Homogenous products
3. Free entry and exit
4. Perfect mobility of factors of production
5. No government intervention
6. Perfect knowledge about the market
7. Profit maximization objective

■ MONOPOLY

Monopoly is the market structure where there is single seller of a product having no close substitutes. The characteristics or features of monopoly are as follow.

1. Single seller and large number of buyers
2. Absence of close substitutes
3. Restrictions on the entry of the new firms
4. Profit maximization
5. Full control over price
6. Possibility of price discrimination

Factors that give rise to monopoly

1. Patent over new innovations
2. Control over the raw materials
3. Cost of establishing an efficient plant
4. Market franchises

■ MONOPOLISTIC COMPETITION

Monopolistic competition is the market structure in which there are many sellers and buyers of differentiated but closely substitutable products and the firms can easily enter into or exit from the market. The characteristics or features of monopolistic competition are as follow.

1. Large number of sellers
2. Product differentiation
3. Freedom of entry and exit of firms
4. Trade mark and patent right
5. Downward sloping demand curve
6. Price maker

■ OLIGOPOLY

Oligopoly is the market structure with few sellers of homogeneous or differentiated product. Under oligopoly, there is competition among the few seller but the sellers have large market share. The characteristics of oligopoly market are as follow.

1. A few sellers
2. Interdependence
3. Advertisements
4. Competition
5. Lack of uniformity
6. Indeterminate demand
7. Price rigidity

■ PROFIT MAXIMIZING GOAL OF THE FIRM

The objective of the firm is to maximize profit. It maximizes its profit when it attains equilibrium. The profit maximization or equilibrium condition(s) of a firm can be analyzed by using TR-TC approach and MR-MC approach.

1. **Total revenue and total cost approach (TR-TC Approach):** Under TR-TC approach, the firm attains equilibrium or maximizes profit in the short-run at the level of production or sale (Q) and price (P) where the positive difference between TR and TC is maximum.
2. **Marginal revenue and marginal cost approach (MR-MC Approach):** Under MR-MC approach, the firm attains equilibrium or maximizes profit at the level of production or sale (Q) and price (P) where $MR = MC$ and MC is rising.

■ PRICE AND OUTPUT DETERMINATION UNDER PERFECT COMPETITION

Under perfect competition, price is determined in the industry by the interaction of market demand and market supply curves and the firms under the industry accept the price determined by the industry. The firms determine only the level of output. A perfectly competitive firm determines the equilibrium level of output where $MR=MC$ and MR curve cuts MC curve from below. In the short-run, a perfectly competitive firm may earn excess profit ($P > AC$) or normal profit ($P = AC$) or even may incur loss ($P < AC$ but $P \geq AVC$); but in the long-run it only earns just normal profit ($P = \text{minimum LAC}$) at equilibrium.

■ DERIVATION OF SHORT-RUN SUPPLY CURVE OF A FIRM AND AN INDUSTRY UNDER PERFECT COMPETITION

We can derive the short-run supply curve of a perfectly competitive firm with the help of short-run marginal cost curve and equilibrium points obtained using MR-MC approach, by equating MC with varying equilibrium prices (average revenues) at varying levels the product. The rising portion of firm's MC curve above the AVC curve gives the short run supply curve of the competitive firm. We can derive the short run supply curve of an industry by summing up the horizontal distance of all short run supply curves of individual firms in the industry.

■ PRICE AND OUTPUT DETERMINATION UNDER MONOPOLY

Given the demand curve of the monopoly firm, the monopoly firm must lower the price to sell additional units of the commodity. A monopolist determines the equilibrium level of output where $MR=MC$ and MR curve cuts MC curve from below. In the short-run, a monopolist may earn excess profit ($P>AC$) or normal profit ($P=AC$) or even may incur loss ($P<AC$ but $P\geq AVC$); but in the long-run it only earns excess profit ($P\geq LAC$) at equilibrium. At long-run equilibrium, a monopolist may be operating with under-utilized or optimally-utilized or over-utilized capacity.

Economic Effects of Monopoly

The economic effect of monopoly can be adverse or negative and positive to the society. They are summarized as below:

1. Adverse or negative economic effects of monopoly
 - a. Allocative inefficiency
 - b. Productive inefficiency
 - c. Loss of social welfare and dead-weight loss
 - d. Contributes income inequality
 - e. Lacks to improve product/Reduce innovation
 - f. Cost inefficiencies
2. Positive economic effect of monopoly
 - a. Promotes innovation
 - b. Benefit from the economies of scale

■ PRICE AND OUTPUT DETERMINATION UNDER MONOPOLISTIC COMPETITION

Even in the monopolistic competition, the objective of the firm is to maximize profit. The monopolistically competitive firm's demand curve is negatively sloped but relatively elastic. Since the demand curve is negatively sloped, the corresponding marginal revenue curve slopes downward and lies below the demand curve.

The firm maximize profits or attain equilibrium or determines price and the level of output where

- i. $MR=MC$ and
- ii. MC curve cuts MR curve from below.

In the short-run, a monopolistically competitive firm may earn excess profit ($P>AC$) or normal profit ($P=AC$) or even may incur loss ($P<AC$ but $P\geq AVC$); but in the long-run it earns just normal profit ($P=LAC$) at equilibrium with under-utilized capacity.

■ MONOPOLISTIC FIRM'S EQUILIBRIUM UNDER PRODUCT VARIATION AND SELLING EXPENSES

A monopolistically competitive firm can increase its expenditures on product variation and selling efforts to increase the demand for its product and make it more price inelastic. Product variation and selling expenses can increase the firm's sales and profits, but they also lead to additional costs. A firm should spend more on product variation and selling effort as long as the MR from these efforts exceeds the MC and until $MR = MC$. In other words, monopolistically competitive firm attains equilibrium or maximizes profit or determines price and

output in the long-run under product variation and selling expenses where,

- i. $MR=LMC$
- ii. LMC curve is rising
- iii. Profit is just normal profit ($P=LAC$)
- iv. Under-utilized capacity
- v. The equilibrium price and quantity sold are higher than from the case without product variation and selling expenses

■ CARTELS

Cartel is defined as the formal organization of the collusive oligopoly firms in an industry with a purpose. Under cartels, the firms make agreement relating to price, market area and output levels. The main aim of the cartel is to reduce uncertainty arising from the mutual interdependence.

The types of cartels are as follows:

1. Cartels fixing price for Joint Profit Maximization (Joint Profit Maximization cartel or perfect cartel)
2. Cartels for Market Sharing between its members (Market sharing cartel)

■ PRICING PRACTICES

Some important pricing strategies and practices are as follows.

- A. **Price Discrimination:** Price discrimination refers to selling same product at different prices to different customers or in different markets. The conditions for price discrimination are as follow.
 - i. Monopoly power
 - ii. Market segmentation
 - iii. Market selling
 - iv. Different elasticity of demand

In terms of nature, the price discrimination can be divided into three types as first degree price discrimination, second degree price discrimination and third degree price discrimination.

- B. **Cost Plus Pricing:** In this method, the price of the product is determined by adding a fixed mark-up on average variable cost. The mark-up is set sufficiently high to cover average variable and fixed costs and also provide a profit margin for the firm.
- C. **Incremental Cost Pricing:** It is a method of pricing a product based on incremental cost. Incremental cost refers to the total additional cost associated with the decisions to expand the output or add a new plant to the existing capacity, add a new variety of products to the product line, etc. In this method, the price of all additional units produced after all direct and indirect fixed costs of production have been met, are based on variable costs rather than the total cost incurred in production.
- D. **Administered Pricing:** The pricing of a product as dictated by an independent agency, as opposed to market forces, is known as administered pricing. The independent agency may be the government or the management of a firm having considerable market share or monopoly in the market.

- E. **Export Pricing:** Export pricing is a method of fixing the price of products which the exporter intends to export and sell in the international markets.
- F. **Predatory Pricing:** It is the deliberate pricing strategy of a business firm in which the price of a product or service is charged at very low (or $P < AC$ or even $P < AVC$). The predator (dominant seller), sets a very low price with the aim of attracting new customers or driving competitors out of the market or create barriers to entry for potential new competitors so that the predator can charge considerably higher price later.
- G. **Skim Pricing:** The skim pricing is a product pricing strategy by which a firm charges the highest initial price for a product or service that customers will pay. As the demand of the first customers is satisfied, the firm lowers the price to attract another, more price-sensitive segment or layer of the consumers.
- H. **Penetration Pricing:** Penetration pricing is a pricing strategy used by new entrants to enter into the market with new products for which substitutes are available, usually by setting a very low price.

CHAPTER 8

THEORY OF FACTOR PRICING

■ RENT

Definition/ Meaning of Rent

Rent is defined as the payment made to the landlord by a tenant for the use of land, i.e. free gift of nature. In other words, it is the reward or price paid for the use of land.

Concept of Contract Rent and Economic Rent

Contract Rent: Contract rent is the total payment made by the tenant to the landlord.

Economic Rent: Economic rent is that part of the payment which is made only for the use of land, i.e. free gift of nature. In economics, rent means economic rent. Economic rent is the pure rent.

Modern Theory of Rent

The modern theory of rent is based on the ideas of economists like Alfred Marshall, Mrs. Joan Robinson and K.E. Boulding. This theory of rent is an improvement and modification over the Ricardian Theory of Rent. According to the modern theory of rent, rent or economic rent is earned not only by land alone but by all factors of production whose supply is fixed. Thus, the modern theory of rent believes that rent is a surplus payment in excess of transfer earnings of the factors of production.

■ WAGES

Definition/ Meaning of Wages

Thus, wage is the price paid to labour for his or her services, physical or mental or both used in the production by the producer or employer according to the contract.

Money and Real Wages

Money Wages (Nominal Wages): Money wage is defined as the price or reward paid in monetary terms to a worker for his or her services.

Real Wages: Real wages is defined as the purchasing power of money wages. In other words, it is the sum of goods and services that money wage can purchase and extra benefits provided to the labours.

Marginal Productivity Theory of Wages

The marginal productivity theory of wages is a very important theory of wages. This theory was first stated by Von Thunen, a German economist in his book 'The Isolated State'. Later, it was developed and popularised by the economists like J.B. Clark, Alfred Marshall, A.C. Pigou, Leon Walras, etc. According to this theory, wages are determined at a point where value of marginal productivity of labour (VMPL) equals to the marginal cost of labour (MCL).

Concept of Collective Bargaining

Collective bargaining is a process of negotiation between employers and trade union (a group of employees) to achieve higher salaries, improving working conditions, non-wage benefits such as medical facility, provident fund, pension, security reduction in working hour, over time, etc.

Minimum Wages Fixation

Minimum wages is defined as the minimum amount of remuneration that an employer is required to pay to the workers for the work performed during a given period of time. Minimum wage is paid to the workers not only to maintain minimum level of subsistence but also for the preservation of the efficiency of the workers. Minimum level of subsistence includes food, shelter, clothes, education, medical and other amenities of life. It is fixed by the government of a country in coordination with business organization and trade unions.

■ INTEREST

Definition/ Meaning of Interest

Interest is defined as the reward received by the capital for its contribution in the production of goods and services.

Gross Interest and Net Interest

Gross Interest: Gross interest is defined as the total amount paid by the borrower to a lender in return of the capital borrowed for a period of time.

Net Interest: Net interest is defined as a part of gross interest or total interest which is exclusively paid for the use of the capital.

Loanable Funds Theory of Interest (Neo-Classical Theory of Interest)

The loanable funds theory of interest was propounded by the economists like Kunt Wicksell, Gunar Myrdal, Bertin Ohlin, Dennis Robertson, etc. According to this theory, rate of interest is determined from the demand for and supply of loanable funds. The demand for loanable funds is inversely related to the rate of interest and supply of loanable funds is positively related to the rate of interest.